

WHAT IS CLAIMED IS:

1. An image display device comprising:

an image display medium which includes a display substrate, a rear substrate, display side electrodes which are linearly disposed at the side of the display substrate in a predetermined direction, rear side electrodes which are linearly disposed at the side of the rear substrate in a direction intersecting the predetermined direction, and plural types of colored particles each having different charging characteristics, which are interposed so as to be movable between the display side electrodes and the rear side electrodes; and

a voltage applying component by which a voltage is applied to the display side electrodes and the rear side electrodes both contributing to image display to generate therebetween a potential difference which triggers particle movement, and a voltage is applied to the display side electrodes and the rear side electrodes, in which at least one of the display side electrodes and the rear side electrodes do not contribute to image display, to generate therebetween a potential difference which is smaller than the potential difference which triggers particle movement.

2. The image display device according to claim 1, wherein the voltage applying component applies a voltage to the display side electrodes and the rear side electrodes such that a potential difference between the display side electrodes contributing to image display and the display side electrodes not contributing to the image display is smaller than a potential

difference between the rear side electrodes contributing to the image display and the rear side electrodes not contributing to the image display.

3. The image display device according to claim 1, further comprising a pre-voltage applying component which, before the voltage applying component applies a voltage, applies a pre-voltage to both the display side electrodes and the rear side electrodes so as to attract particles to be moved to the electrodes on which the particles are adhering.

4. The image display device according to claim 3, wherein, the pre-voltage applying component applies the pre-voltage, in a case that a potential difference between the display side electrodes and the rear side electrodes, in which at least one of the display side electrodes and the rear side electrodes do not contribute to image display, exceeds a predetermined value when the voltage applying component applies a voltage.

5. The image display device according to claim 3, wherein a value of the voltage applied by the pre-voltage applying component is the same as a value of the voltage which corresponds to the potential difference which triggers particle movement.

6. The image display device according to claim 1, wherein the types of particles comprise positively charged black particles and negatively charged white particles.

7. An image display device comprising:

an image display medium which includes a display substrate, a rear substrate, display side electrodes which are linearly disposed at the side of the display substrate in a predetermined direction, rear side electrodes which are linearly disposed at the side of the rear substrate in a direction intersecting the predetermined direction, and plural types of colored particles each having different charging characteristics, which are interposed and movable between the display side electrodes and the rear side electrodes; and

a voltage applying component by which a voltage is applied to the display side electrodes and the rear side electrodes both contributing to image display to generate therebetween a potential difference which triggers particle movement, and by which a voltage is applied to the rear side electrodes not contributing to image display to generate a potential difference which is smaller than the potential difference which triggers particle movement between the rear side electrodes and the display side electrodes both not contributing to the image display, and between the rear side electrodes not contributing to the image display and the display side electrodes contributing to the image display.

8. The image display device according to claim 7, wherein the voltage applying component applies substantially the same voltage to both the display side electrodes which contribute to image display and the rear side electrodes which do not contribute to image display.

9. The image display device according to claim 7, further comprising a pre-voltage applying component which, before the voltage applying component applies a voltage, applies a pre-voltage to both the display side electrodes and the rear side electrodes so as to attract particles to be moved to the electrodes on which the particles are adhering.

10. The image display device according to claim 9, wherein the pre-voltage applying component applies the pre-voltage, in a case that a potential difference between the display side electrodes and the rear side electrodes, in which at least one of the display side electrodes and the rear side electrodes do not contribute to image display, exceeds a predetermined value when the voltage applying component applies a voltage.

11. The image display device according to claim 7, wherein a value of the voltage applied by the pre-voltage applying component is the same as a value of the voltage which corresponds to the potential difference which triggers particle movement.

12. The image display device according to claim 7, wherein the types of particles comprise positively charged black particles and negatively charged white particles.

13. A driving method for displaying an image to an image display

medium including a display substrate, a rear substrate, display side electrodes which are linearly disposed at the side of the display substrate in a predetermined direction, rear side electrodes which are linearly disposed at the side of the rear substrate in a direction intersecting the predetermined direction, and plural types of particles each having different charging characteristics which are interposed and movable between the display side electrodes and the rear side electrodes, the method comprising the steps of

applying a voltage to the display side electrodes and the rear side electrodes both contributing to image display so that a potential difference generated therebetween corresponds to a potential difference which triggers particle movement; and

applying a voltage to the display side electrodes and the rear side electrodes, in which at least one of the display side electrodes and the rear side electrodes do not contribute to image display, to make a potential difference generated therebetween smaller than the potential difference which triggers particle movement.

14. The method according to claim 13, further comprising a step of applying the pre-voltage, in a case that a potential difference between the display side electrodes and the rear side electrodes, in which at least one of the display side electrodes and the rear side electrodes do not contribute to image display, exceeds a predetermined value when the voltage applying component applies a voltage.

15. The method according to claim 13, wherein a value of the voltage applied by the pre-voltage applying component is the same as that which corresponds to the potential difference which triggers particle movement.

16. The method according to claim 13, wherein the types of particles comprise positively charged black particles and negatively charged white particles.

17. A driving method for displaying an image to an image display medium including a display substrate, a rear substrate, display side electrodes which are linearly disposed at the side of the display substrate in a predetermined direction, rear side electrodes which are linearly disposed at the side of the rear substrate in a direction intersecting the predetermined direction, and at least one-colored particles having different charging characteristics which are interposed and movable between the display side electrodes and the rear side electrodes, the method comprising the steps of:

applying a voltage to the display side electrodes and the rear side electrodes both contributing to image display so that a potential difference generated therebetween corresponds to a potential difference which triggers particle movement; and

applying a voltage to the rear side electrodes to generate a potential difference which is smaller than the potential difference which triggers particle movement between the rear side electrodes and the display side electrodes both not contributing to the image display, and the display side

electrodes contributing to the image display.

18. The method according to claim 17, further comprising a step of applying the pre-voltage, in a case that a potential difference between the display side electrodes and the rear side electrodes, in which at least one of the display side electrodes and the rear side electrodes do not contribute to image display, exceeds a predetermined value when the voltage applying component applies a voltage.

19. The method according to claim 18, wherein a value of the voltage applied by the pre-voltage applying component is the same as a value of the voltage which corresponds to the potential difference which triggers particle movement.

20. The method according to claim 17, wherein the types of particles comprise positively charged black particles and negatively charged white particles.